

## DIGITAL FREQUENCY SYNTHESIS

### ABSTRACT

**[0090]** Frequency synthesis is implemented by providing a delta-sigma modulated signal associated with a selected frequency, which frequency can vary based on a selection input. The delta-sigma modulated signal is converted from the digital to analog domain. The delta-sigma modulated signal can be provided directly from memory based on the selection input or, alternatively, it can be provided by a signal generator and processed by a delta-sigma modulator to provide the delta-sigma modulated signal. The selected frequency can be varied at a high rate of speed.